

CUSTOMER NO.: 24498

Serial No. 09/748,947

Reply to Office Action dated 12/17/04

Response dated 03/03/05

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Amendments to the Drawings

The attached drawing sheets include changes to Figures 1-2 and 4-5. These sheets, which include Figures 1-5, replace the original drawing sheets including Figures 1-5.

In Figure 1, appropriate labels corresponding to all blocks have been added. In addition, a legend reading "Prior Art" has been added to Figure 1 as required by the Examiner.

In Figures 2 and 4-5, appropriate labels corresponding to all blocks have been added.

Attachment: 3 Replacement Sheets

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REMARKS

In the Office Action, the Examiner noted that claims 11-26 are pending in the application and that claims 11-26 stand rejected. By this response claims 11, 13 and 20-23 are amended to correct for informalities pointed out by the Examiner and not in response to prior art.

In view of the amendments presented above and the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. Thus the Applicant believes that all of these claims are now in allowable form.

Objections

A. Drawings

Figure 1

The Examiner objected to Figure 1 stating that Figure 1 should be designated by a legend such as Prior Art because only that which is old is illustrated. The Examiner further objected to Figure 1 stating that proper labels should be provided for all blocks.

In response, the Applicant has amended Figure 1 to include the legend Prior Art and to include an appropriate legend for each block as required by the Examiner. Having done so, the Applicant respectfully submits that the basis for the Examiner's objection to Figure 1 has been removed and respectfully requests that the Examiner's objection to Figure 1 be withdrawn.

Figures 2 and 4-5

The Examiner objected to Figures 2 and 4-5 stating that proper labels should be provided for all respective blocks of Figures 2 and 4-5.

In response, the Applicant has amended Figures 2 and 4-5 to include an appropriate legend for each of the respective blocks as required by the Examiner. Having done so, the Applicant respectfully submits that the basis for the Examiner's objection to Figures 2 and 4-5 has been removed and respectfully requests that the Examiner's objection to Figures 2 and 4-5 be withdrawn.

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B. Claims

Claim 13

The Examiner objected to Claim 13 stating that a comma must be followed by the word "encoder".

In response, the Applicant has amended claim 13 to include a comma after the word "encoder" as required by the Examiner. Having done so, the Applicant respectfully submits that the basis for the Examiner's objection to Claim 13 has been removed and respectfully requests that the Examiner's objection to Claim 13 be withdrawn.

Rejections

A. 35 U.S.C. § 102

The Examiner rejected claims 11-23, 25 and 26 under 35 U.S.C. § 102(b) as being anticipated by Logan et al. (U.S. Patent 5,371,551, hereinafter "Logan"). The rejection is respectfully traversed.

The Examiner alleges that regarding claims 11 and 17, Logan teaches a digital video system including all of the elements of the Applicant's claims 11 and 17. The Applicant respectfully disagrees.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (*Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant submits that the Logan reference fails to teach, suggest or disclose each and every element of at least the invention as recited in the Applicant's independent claims 11 and 17, which specifically recite:

"A digital video recorder comprising:
an encoder of a first analog signal into a first digital stream;
a decoder of a second digital stream into a second analog signal;
a medium interface for reading and recording on a medium;
at least one digital source outputting a third digital stream; and,
a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface,

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wherein the multiplexer comprises a first switch, which selectively couples the decoder to the encoder or to the digital source." (emphasis added).

"A digital video recorder comprising:
a digital encoder ;
a digital decoder ;
a medium interface for reading and recording on a medium;
a multiplexer, coupled to the digital encoder, to the digital decoder and to the medium interface, the multiplexer having a first switch which couples the digital decoder with the digital encoder." (emphasis added).

The Applicant's invention is directed at least in part to a digital video recorder including at least an analog source and a digital source where a received analog signal is encoded by an encoder. In the invention of the Applicant, a multiplexer is connected to both the encoder and to the digital source. The multiplexer is also connected to a medium interface for recording and reading on a medium and to a digital decoder linked to a display. The Applicant's invention enables a video recorder to independently record and monitor any of the sources and further a pre-recorded signal. More specifically, in support of the invention, at least as claimed by the Applicant's claims 11 and 17 recited above, the Applicant in the Specification, specifically recites:

"The digital streams from the digital source 14 and from the digital encoder 16 are coded according to the same format, which may be for instance the widely-used MPEG-II format. The digital encoder 16 on the one hand and the digital source 14 on the other hand are connected to two distinct inputs of a multiplexer 18.

The multiplexer 18 is also connected via a bi-directional link to a medium interface 20. The medium interface 20 is able to convert the coded digital stream into a bit stream to record it on a medium. For instance, in a digital VCR, the medium interface 20 comprises a drum carrying magnetic heads in order to record the bit stream on a magnetic tape according to the D-VHS format. In the reverse way, the medium interface 20 can read a bit stream from the pre-recorded medium and convert it into a digital stream coded according to a specific format, like MPEG-II, and output the digital stream on the bi-directional link.

An output of the multiplexer 18 is connected to a digital decoder 22. The digital decoder 22 is able to convert a coded digital stream (for instance

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a MPEG-II stream) into an analog signal to be displayed on a display 25."
(See Applicant's Specification, page 4, lines 11-27).

The Applicant, in the Specification, further recites:

"The multiplexer 18 whose constitution will be detailed below allows to record and display independently any of the video signals from the analog source 12 and the digital source 14. Of course, it also allows to display a pre-recorded video signal.

As can be seen from figure 3 and as already explained, the multiplexer 18 has two separate inputs 22, 24 for receiving each a coded digital video stream. The input 22 is connected to the output of the digital encoder 16 and the input 24 is connected to the output of the digital source 14. The multiplexer 18 has an output 28 connected to the digital decoder 22. The multiplexer 18 is also connected at point 26 to the medium interface 20 via the bi-directional link.

The multiplexer 18 comprises a first switch 30 and a second switch 32. The first switch 30 allows to selectively link point 26 to input 22 or to input 24. The first switch 30 consequently allows to choose which video signal (among video signal from the analog source 12 and video signal from the digital source 14) should be sent to the medium interface 20 for recording.

The second switch 32 allows to selectively connect output 28 to input 22, to input 24 or to point 26. The second switch 32 thus allows to choose which video signal is to be decoded in decoder 22 and displayed on display 25 among video signal from the analog source 12 (input 22) and video signal from the digital source 14 (input 24), independently of the possible recording of one of these signals. The second switch 32 also allows to display a pre-recorded signal read from the medium interface 20 during play-back (point 26)." (See Applicant's Specification, page 4 line 34 through page 5, line 19).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention includes at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder to the encoder or to the digital source" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17.

The Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Logan for a digital video recorder including at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder to the encoder or to the digital source" as

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taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17.

In contrast to the invention of the Applicant, Logan specifically teaches a broadcast recording and playback device employing a "circular buffer" which constantly records one or more incoming audio or video program signals and a microprocessor for accessing the memory to read a playback signal from the circular buffer to display programming material delayed from its receipt by a selectable delay interval. (See Logan, Abstract). As clearly depicted in at least Fig. 1 of Logan however, the multiplexer (3) of Logan is clearly not coupled to the decoder (8) of Logan as taught and claimed in the Applicant's invention. From Fig. 1 of Logan and the description in col. 3, lines 20 to 23, it is clearly seen that the decoder (8) in Logan is only coupled to the medium interface (5) and to a display unit (10). That is, it is clear from the Figures of Logan and the description in Logan for the Figures, that the digital video system of Logan does not have the claimed structure of the Applicant's invention and that the invention of Logan is unable to perform the function of the Applicant's invention.

More specifically, Logan does not teach, suggest or anticipate a digital video recorder including at least an encoder, a decoder, a medium interface, a digital source and "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder to the encoder or to the digital source" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17. The claimed structure of the Applicant's invention enables a video recorder in accordance with the Applicant's invention to independently record and monitor any of the sources and a pre-recorded signal.

In contrast to the invention of the Applicant, at least with respect to independent claims 11 and 17, Logan teaches in at least col. 4, lines 14 to 39 (referring to Fig. 2) that one or more available incoming video signals are selected, digitized, compressed and recorded in the memory system. Logan further teaches that a user then selects a location in the memory system from which programming is to be read. The retrieved signal is then decompressed, transformed into an analog signal and displayed on the display unit. This indicates that in order to be

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able to record one signal while watching another signal, the memory system must on one hand be capable of recording at least two signals at the same time, and on the other hand allow for simultaneous record and playback. This is in contrast to the Applicant's invention where a signal from the encoder is able to be communicated directly to the decoder without prior recording as taught in Logan.

As such and for at least the reasons described above and specifically that Logan does not teach, suggest or anticipate a digital video recorder including at least an encoder, a decoder, a medium interface, a digital source and "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder to the encoder or to the digital source" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17, the Applicant respectfully submits that Logan fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claims 11 and 17 as required for anticipation, and that therefore the teachings and disclosure of Logan do not anticipate the Applicant's invention, at least with respect to independent claims 11 and 17.

Therefore, the Applicant submits that for at least the reasons recited above independent claims 11 and 17 are not anticipated by the teachings of Logan and, as such, fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Likewise, independent claim 21 recites similar relevant features as recited in the Applicant's independent claims 11 and 17. More specifically, claim 21 recites "means for allowing the decoder to decode the first digital stream or the second digital stream into a second analog stream." However, there is absolutely no teaching, suggestion or disclosure in Logan for means for allowing the decoder to decode the first digital stream. For allowing the decoder to decode the first digital stream, the output of the multiplexer (3) of Logan would have to be directly coupled to the decoder (8) as in the invention of the Applicant, however this is not so in Logan. As such, the Applicant submits that for at least the reasons recited above

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independent claim 21 is also not anticipated by the teachings of Logan and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 12-16, 18-20, 22-23, 25 and 26 depend either directly or indirectly from independent claims 11, 17 and 21 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 12-16, 18-20, 22-23, 25 and 26 are also not anticipated by the teachings of Logan. Therefore the Applicant submits that dependent claims 12-16, 18-20, 22-23, 25 and 26 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 102

The Examiner rejected claims 21 and 24 under 35 U.S.C. § 102(b) as being anticipated by Ochi et al. (U.S. Patent 6,556,776, hereinafter "Ochi"). The rejection is respectfully traversed.

The Examiner alleges that regarding claim 21 Ochi teaches a digital video system including all of the elements of the Applicant's claim 21. The Applicant respectfully disagrees.

The Applicant submits that the Ochi reference fails to teach, suggest or disclose each and every element of at least the invention as recited in the Applicant's independent claim 21, which specifically recites:

"A digital video recorder comprising:
an encoder of a first analogue signal into a first digital stream;
 a medium interface for reading a second digital stream on a medium;
 a decoder;
 means for allowing the decoder to decode the first digital stream or the second digital stream into a second analog stream."
 (emphasis added).

The Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Ochi for "an encoder of a first analogue signal into a first digital stream" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 21. More specifically, Ochi teaches a digital signal

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recording/reproducing apparatus including a single digital information decoding unit (2). The decoding unit of Ochi decodes a digital signal received via an input terminal (5) to obtain an analog signal, and outputs the analog signal to a selecting unit (4) as a first analog video/audio signal. The apparatus of Ochi further includes a recording/reproducing unit (3) for recording either the digital signal communicated to it from the decoding unit (2) via a bus line (89), or a further analog video/audio signal received via a further input (6).

In Ochi, when the recording/reproducing unit (3) reproduces the latter analog video/audio signal, this signal is directly communicated to the selecting unit (4). However, when the recording/reproducing unit (3) reproduces the digital signal, this signal is communicated to the decoding unit (2), which then transfers the decoded signal to the selecting unit (4).

However, there is absolutely, no teaching, suggestion or disclosure in Ochi for **"an encoder of a first analogue signal into a first digital stream"** as taught in the Applicant's Specification and claimed by at least the Applicant's claim 21. That is, in Ochi a received analog video/audio signal is received through an input terminal (28) and fed to an analog video/audio signal record-processing circuit 22, and it is processed for recording with AGC, clamping, emphasizing, FM modulation, etc. in order to make it suitable for recording on a magnetic tape 34. In Ochi, a recording signal conforming to a specification of an analog recording method of the second recording format, the VHS format for example, is then recorded on the magnetic tape 34 via a recording head 30. As previously recited, however, Ochi fails to teach, suggest or anticipate **"an encoder of a first analogue signal into a first digital stream"** as taught in the Applicant's Specification and claimed by at least the Applicant's claim 21.

Providing an encoder for encoding a first analog signal into a first digital stream as taught in the Applicant's Specification and claimed in at least the Applicant's claim 21 has the advantage over Ochi in that a medium interface does not need to be capable of reading and recording both analog and digital signals. In contrast to the invention of the Applicant, Ochi, in col. 5, lines 34 to 38, specifically teaches that the recording/reproducing unit (3) is provided with a first

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recording/reproducing unit for recording and reproducing a digital signal and a second recording/reproducing unit for recording and reproducing an analog signal.

As such and for at least the reasons described above and specifically that Ochi does not teach, suggest or anticipate a digital video recorder including at least "an encoder of a first analogue signal into a first digital stream" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 21, the Applicant respectfully submits that Ochi fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claim 21 as required for anticipation, and that therefore the teachings and disclosure of Ochi do not anticipate the Applicant's invention, at least with respect to independent claim 21.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 21 is not anticipated by the teachings of Ochi and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claim 24 depends directly from independent claim 21 and recites additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claim 24 is also not anticipated by the teachings of Ochi. Therefore the Applicant submits that dependent claim 24 also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

Conclusion

Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of

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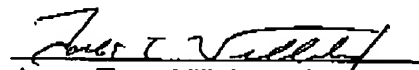
the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,

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